

**Planning Statement for VPDES Permit Application Processing
DEQ-SCRO**

VPDES	OwnerName	Facility	County
VA0066869	VA Dept. of Corrections	Nottoway Correctional Center STP	Nottoway

Outfall #: 001

River Basin: Chowan and Dismal Swamp **Receiving Stream:** Mallorys Creek

Subbasin: Chowan River Basin

Watershed Code: K15R

River Mile: 3.5

	MGD		MGD
1Q10	0.006	HF 1Q10	0.249
7Q10	0.008	HF7Q10	0.304
30Q5	0.037	HF30Q10	0.494
30Q10	0.019	HM	0

Modeling Notes

No Model

WQMP Name No Plan

Statement

TMDL ID None

Impairment Cause

TMDL Due Date None

Completed TMDL Information

Chowan River Basin TMDL

WLA assigned to facility. Reduced bacteria limit of 98 cfu/100mL meets TMDL.

TMDL Approval Dates EPA - 10/15/2005 & SWCB 9/27/2006

Amanda B Gray
Amanda B. Gray, Water Planning Engineer or
Paula Nash, TMDL Coordinator

10.11.12
Date

MEMORANDUM
Department of Environmental Quality
South Central Regional Office

7705 Timberlake Road

Lynchburg, Virginia 24502

Subject: Planning and TMDL Service Requests for VPDES Permits

To: Amanda Gray, Water Planning Engineer to
Paula Nash, TMDL Coordinator

From: Leah Revelle, BRRO - L

Date: October 9, 2012

Copies: Planning File

The request for information is to be made at the following times:

Planning: Upon sending the reissuance reminder letter to the facility or, for an issuance or modification, at the time of application/modification request receipt.

TMDL: Same as above. For VPDES general permits, at the time of registration statement receipt.

FACILITY NAME: **DOC - Nottoway Correctional Center WWTP**

VPDES PERMIT NO. **VA0066869** EXPIRATION DATE: **April 24, 2013**

FACILITY PHYSICAL LOCATION: **2892 Schutt Road, Burkeville 23992 (Nottoway County)**

INDIVIDUAL PERMIT ACTION: Issuance **Reissuance** Modification

GENERAL PERMIT ACTION: New Coverage Previously Covered - **(Not Applicable)**

PERMIT TYPE: Major **Minor** General **Municipal** Industrial Storm Water TMP TRE

If a VPDES General Permit, which type: _____

PERMIT WRITERS: ATTACH THE FOLLOWING

- **Topo map with facility location and outfall locations clearly marked (include any proposed outfalls)**
- **Site diagram for facilities with multiple outfalls**
- **Description or map showing effluent flow path if not apparent on topo map**
- **The outfall numbers, latitude, longitude, receiving stream and topo name in the table below (use an additional sheet if there are more outfalls)**

Outfall No.	Latitude	Longitude	Receiving Stream	Topo Name
001	37° 10' 25"	78° 11' 11"	Mallory's Creek	072B, Crewe West

DATE INFORMATION NEEDED: 10/16/2012

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
South Central Regional Office - Water Planning
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

SUBJECT: Flow Frequency Determination
Nottoway Correctional Center STP – VA#0066869

TO: Leah Revelle

FROM: Amanda Gray 

DATE: October 10, 2012

COPIES: File

This memo supersedes my February 2, 2006 memo concerning the subject VPDES permit. The Nottoway Correctional Center STP discharges to Mallory Creek near Burkeville, Virginia. Stream flow frequencies are required at this site by the permit writer for the purpose of calculating effluent limitations for the VPDES permit.

The VDEQ operated a continuous record gage on the Nottoway River near Burkeville, VA (#02044000) from 1947-1986. The gage is in close proximity to the discharge point. The flow frequencies for the gage and the discharge point are presented below. The values at the discharge point were determined by drainage area proportions and do not incorporate any upstream discharges, withdrawals, springs or other influences.

Nottoway River near Burkeville, VA (#02044000):

Drainage Area = 38.7 mi²

1Q10 = 0.11 cfs	High Flow 1Q10 = 4.6 cfs
7Q10 = 0.15 cfs	High Flow 7Q10 = 5.6 cfs
30Q5 = 0.69 cfs	High Flow 30Q10 = 9.1 cfs
30Q10 = 0.34 cfs	Harmonic Mean = None due to zero flows

Mallorys Creek at discharge point:

Drainage Area = 3.25 mi²

1Q10 = 0.009 cfs (0.006 MGD)	High Flow 1Q10 = 0.386 cfs (0.249 MGD)
7Q10 = 0.013 cfs (0.008 MGD)	High Flow 7Q10 = 0.47 cfs (0.304 MGD)
30Q5 = 0.058 cfs (0.037 MGD)	High Flow 30Q10 = 0.764 cfs (0.494 MGD)
30Q10 = 0.029 cfs (0.019 MGD)	Harmonic Mean = None

The high flow months are December through April. If there are any questions concerning this analysis, please let me know.

Development of Bacterial TMDLs for the Chowan Study Area

Prepared for:
Virginia Department of Environmental Quality
Submitted December 14, 2004
Re-submitted April 25, 2005



New River-Highlands
RC&D



Submitted by:
MapTech, Inc., 1715 Pratt Drive, Suite 3200, Blacksburg VA 24060
New River-Highlands RC & D, 100 USDA Drive, Suite F, Wytheville VA 24382

Table 3.4 Summary of VPDES permitted point sources in the Chowan Study Area.

Receiving Water	Facility Name	Permit No	Design Flow (MGD)	Permitted For Fecal Control	Data Availability
<i>Upper Blackwater River Basin</i>					
Cypress Swamp (Hazel Swamp)	Surry County High School	VA0029025	0.020	Yes	1/90 - 3/01
Cypress Swamp (Hazel Swamp)	Surry County WWTF	VA0088463	0.13	Yes	3/01 - 8/04
<i>Upper Nottoway River Basin</i>					
Big Hounds Creek/U.T.	Victoria East Sewage Treatment Plant	VA0020184	0.4	Yes	2/99 - 4/04
Mallory Creek	DOC - Nottoway Correctional Center	VA0066869	0.35	Yes	5/99 - 4/04
Little Nottoway River/U.T.	Nottoway County Schools Nottoway High	VA0061158	0.0256	Yes	5/99 - 4/04

Table 5.16 Land-based and Direct nonpoint source fecal coliform load reductions in the Rattlesnake (Creek) Swamp impairment for final allocation.

Source	Total Annual Loading for Existing Run (cfu/yr)	Total Annual Loading for Allocation Run (cfu/yr)	Percent Reduction
Land Based			
Livestock Access	3.67E+12	3.67E+10	99.00
Barren	3.81E+12	6.17E+11	84.00
Commercial	4.52E+11	4.52E+09	99.00
Cropland	7.74E+13	7.74E+11	99.00
Pasture	7.97E+13	7.97E+11	99.00
Residential	3.56E+13	3.56E+11	99.00
Water	0.00E+00	0.00E+00	0.00
Wetlands	2.25E+14	3.60E+13	84.00
Woodland	2.68E+14	4.31E+13	84.00
Direct			
Human	1.10E+12	0.00E+00	100.00
Livestock	0.00E+00	0.00E+00	100.00
Wildlife	1.52E+13	5.33E+12	65.00

Table 5.17 Average annual bacterial loads (cfu/year) modeled after TMDL allocation in the Chowan Study Area watershed impairments.

Impairment	TMDL Standard	WLA (cfu/year)	LA (cfu/year)	MOS	TMDL (cfu/year)
Beaverpond Creek	<i>E. coli</i>	0.00E+00	2.62E+12	<i>Implicit</i>	2.62E+12
Big Hounds Creek VA0020184	<i>E. coli</i>	6.96E+11 6.96E+11	4.45E+12		5.14E+12
Cypress Swamp VA0088463	<i>E. coli</i>	2.26E+11 2.26E+11	6.33E+12		6.56E+12
Little Nottoway VA0066869 VA0061158	<i>E. coli</i>	6.54E+11 6.09E+11 4.46E+10	1.11E+13		1.18E+13
Nottoway River	<i>E. coli</i>	0.00E+00	1.04E+13		1.04E+13
Mill Swamp	<i>E. coli</i>	0.00E+00	8.06E+12		8.06E+12
Raccoon Creek	<i>E. coli</i>	0.00E+00	1.44E+13		1.44E+13
Rattlesnake (Creek) Swamp	<i>E. coli</i>	0.00E+00	1.53E+13		1.53E+13